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10/550,252

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Riki Okamoto

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12/04/2007

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EXAMINER

YEE, DEBORAH

ART UNIT

PAPER NUMBER

1793

MAIL DATE

DELIVERY MODE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

10/550,252

**Applicant(s)**

OKAMOTO ET AL.

**Examiner**

Deborah Yee

**Art Unit**

1793

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) 6 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 September 2005 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 9-21-05; 1-31-07; 1-20-06.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_.

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1 to 5, drawn to hot rolled steel sheet alloy composition.

Group III, claim(s) 6, drawn to method of making steel sheet alloy comprising the steps of hot rolling, cooling to 650-800C at a rate of at least 20C/sec, air cooling for 0.5 to 15 seconds and further cooling to 300 to 600C at a rate of at least 20C/sec.

2. The inventions listed as Groups I and II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: The common technical feature that Groups I and II share is the composition of claim 1. This composition does not provide a contribution over the prior art, as evident by Japanese patent 2001-342543 or US patent 6364,968. Thus, the two Groups lack unity of invention, see MPEP 1850.

3. During a telephone conversation with Mr. John Kelly on November 26, 2007 a provisional election was made without traverse to prosecute the invention of Group I, claims 1 to 5. Affirmation of this election must be made by applicant in replying to this Office action. Claim 6 is withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

4. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one

or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1 to 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese patent 2001-342543 (hereinafter JP'543) cited by Applicants in IDS dated September 21, 2005 or US Patent 6,364,968 (hereinafter Yashuara et al.) alone or in view of US Patent 5,470,529 (hereinafter Nomura et al. ).

7. JP'543 in claims 1 to 4 on page 2 and Yashuara et al. patent in claims 1 to 4 of column 21, each disclose a hot rolled steel sheet having a composition with constituents whose wt% ranges overlap those recited by the claims; such overlap in wt% ranges establishes a prima facie case of obviousness since it would be obvious to select the claimed alloy wt% ranges over the broader disclosure of the prior art because the prior art teaches the same utility (making automotive components) and similar properties of high tensile strength and high formability.

8. More specifically, steel V of JP'543 in tables on pages 10 and 11 meets the claimed composition and when calculated, satisfies equations<1> and <2> and closely meets equation <3> with a value of 464 slightly lower than the claimed limit of >465.

Prior art steel V, also, has a tensile strength (TS)  $V1=1043 \text{ N/mm}^2$  and  $V2=1038 \text{ N/mm}^2$ , which are within the claimed TS range of at least  $980 \text{ N/mm}^2$ .

9. Similarly Yashuara et al. patent in tables 1 to 3 in columns 15-18 discloses steel 7 that closely meets the claimed composition and when calculated, satisfies equations <2> and <3> and closely meets equation <1> with a value of 2.28 slightly higher than the claimed range <1.7. Prior art steel 7, also, has a TS =  $1020 \text{ MPA (N/mm}^2)$ , which is within the claimed TS range of at least  $980 \text{ N/mm}^2$ . Although steel 7 does not include Nb, such would be obvious to include since a broad range of 0.003 to 0.20 wt% is taught.

10. Since Applicants has not demonstrated criticality of the claimed equation ranges (e.g. by comparative test data), then a composition with an equation value slightly outside the claimed range would depict a mere difference in the proportion of elements without any attendant unexpected results, and would not patentably distinguish claims over prior art. Note the comparative test data disclosed on pages 13 and 14 of Applicants' specification is insufficient since examples a to d are not representative of the examples taught by JP'543 or Yashuara et al. patent.

11. Moreover, JP'543 or Yashuara et al. patent broadly teach adding the alloying elements Mo, Cu, Ni, Mg, Ca, Zr and/or REM in wt% ranges that overlap those recited by claims 2 to 5. Even though V is not disclosed, such would be an obvious to include since V is a well known steel additive to further enhance strength for analogous low-alloy steels, as evident by secondary reference, Nomura et al., on lines 43 to 54 in column 9.

***Claim Objections***

12. Claim 3 is objected to because of the following informalities: In equation 3, it should be recited as <3>' . Appropriate correction is required.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Deborah Yee whose telephone number is 571-272-1253. The examiner can normally be reached on monday-friday 6:00 am-2:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Deborah Yee/  
Primary Examiner  
Art Unit 1793

/DY/